

REMARKS

Claims 1-4, 7, 8, 10-12, and 16-18 are pending in the above-identified application. Claim 6 has been inserted into claim 1. Support for the changes to claim 1 is found at page 8, line 2 from the bottom to page 9, line 6, as well as page 16, lines 11-25 of the present specification.

Issues under 35 USC 102(b) and 103(a)

Claims 1, 2, 5, 8 and 10-12 have been rejected under 35 USC 102(b) as being anticipated by Schrenk '978 (US 5,540,978).

Claims 3, 4, 6, 7 and 13-18 have been rejected under 35 USC 103(a) as being unpatentable over Schrenk '978, and further in view of Wheatley '880 (US 5,126,880).

Claims 3, 4, 6, 7 and 13-18 have been rejected under 35 USC 103(a) as being unpatentable over Schrenk '978, and further in view of Arends '659 (US 5,360,659).

The above rejections are traversed based on the following reasons.

Distinctions over Cited References

Schrenk '978 discloses an ultraviolet light reflecting film. In Schrenk '978 the object is to reflect ultraviolet light for the purpose of "solar detoxification", for example. Thus, the laminated film of Schrenk '978 must have a construction so as to reflect ultraviolet light or sunlight. Specifically, the structure must be such that the sum of the optical thicknesses in a repeat unit are in the range of from about 0.15 μm to about 0.20 μm (see col. 3, lines 26-50). Theoretically, this means that it is necessary for the sum of the optical thicknesses in a repeat unit of the film of Schrenk '978 to have one half length of the wavelength of ultraviolet light. Because it is known that the ultraviolet light which reaches the surface of the earth from the sun has a wavelength range of 315-400 nm, the sum of the optical thicknesses in a repeat unit of the film of Schrenk '978 should be 157.5-200 nm.

Schrenk '978 fails to disclose a film wherein 75% or more of each of the layers constituting the laminated film have a thickness of 30 nm or less as in the present invention. That is, the layer thicknesses of the presently claimed film are too small to satisfy the requirements of Schrenk '978. Also, the film of the present invention would fail to efficiently reflect ultraviolet light, or any other light from the sun. Thus, Schrenk '978 actually teaches away from the smaller layer thicknesses of the film of the present invention, such that significant

patentable distinctions exist over Schrenk '978 and the above rejections based thereon should be withdrawn.

Arends '659 discloses a laminated film and describes at col. 1, lines 6-11 that, "The present invention relates to a two component infrared reflecting film... which [reflects] light in the infrared region of the spectrum while suppressing second, third and fourth order reflections in the visible region of the spectrum." A similar description can be seen at col. 6, lines 19-32 as well. The Arends '659 disclosure and common knowledge in this field include the following:

- (a) high order reflection is only a subsidiary phenomenon;
- (b) high order reflection is an undesired phenomenon in most cases (since one would typically desire to reduce such a high order reflection effect); and
- (c) the main object in this field is to reflect light.

In view of this, one skilled in the art in this field would not desire high order reflection effects and would want to minimize or suppress second, third and fourth order reflections, such that the design of the laminated film must employ layer thicknesses to cause first order (infrared) reflection. Consequently, Arends '659 requires that the sum of optical thicknesses in a repeat unit of the film must not fall below one half wavelength of ultraviolet light (i.e. not below 157.5 nm). Therefore, the above distinctions over Schrenk '978 also apply to Arends '659 as the layer thicknesses are too large and outside the scope of the present invention.

Wheatly '880 also relates to films that reflect (visible) light. With reference to the above discussion, it is evident that the thickness of a pair of adjacent resin layers must be one half the wavelength of the light that is to be reflected. Thus, Wheatly '880, just as with Schrenk '978 and Arends '659, requires layer thicknesses above that recited in the present claims. Wheatly '880 discloses that a portion of the layers have optical thicknesses between 0.09 and 0.45 μm , with the remaining layers having an optical thickness of not greater than 0.09 μm or not less than 0.45 μm , it is submitted that in order to achieve the described reflection characteristics, the film of Wheatly '880 does not satisfy the claimed feature of the present invention wherein the film has layers with the thickness of each of 75% or more of the layers constituting the laminated film being 30 nm or less. Thus, significant patentable distinctions also exist over Wheatly '880, such that the above rejection based thereon must be withdrawn.


It is submitted for the reasons above that the present claims define patentable subject matter such that this application should now be placed in condition for allowance.

If any questions arise in the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

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Respectfully submitted,

By 

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